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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,480	09/29/2005	Terrence Kolenc	22188/07058	4310
24024	7590	12/04/2008		
CALFEE HALTER & GRISWOLD, LLP 800 SUPERIOR AVENUE SUITE 1400 CLEVELAND, OH 44114				
EXAMINER				
FRISTOE JR, JOHN K				
ART UNIT		PAPER NUMBER		
3753				
NOTIFICATION DATE		DELIVERY MODE		
12/04/2008		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipdocket@calfee.com
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Office Action Summary

Application No.

10/551,480

Applicant(s)

KOLENC ET AL.

Examiner

JOHN K. FRISTOE JR

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 02 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22, 26-34, 60-63 and 74-77 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-16, 27-34, 60-63, 74, 75 and 77 is/are allowed.
- 6) ☒ Claim(s) 17-22, 26 and 76 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/29/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-849)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see page 9- page 11 paragraph 3, filed 9/2/2008, with respect to the protrusions extending from the annular wall of the seal have been fully considered and are persuasive. The rejections of claims of 1-16, 27-34, 60-63, 74, 75, and 77 have been withdrawn.
2. Applicant's arguments filed 9/2/2008 have been fully considered but they are not persuasive. Applicants argue that the valve recited in claim 17 requires that protrusions extend from the outer circumferential surface and that the protrusions of Fritz et al. do not extend from the outer circumferential surface, the examiner disagrees. The bottom corners of Fritz et al. extend from the outer circumferential surface of the valve seat member. Since any changes to the following prior art rejections, the instant Office action has been made final.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17-22, and 76 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 1,947,257 (Fritz et al.) in view of U.S. Pat. No. 5,851,004 (Wu et al.). Fritz et al. discloses a valve assembly comprising a fluid passageway (within element 10), a valve body (10, 11), a valve seat (21), on or more protrusions (37-39) that penetrate a surface (in between elements 10 and 11) a portion of the valve body (10, 11), wherein the valve seat (21) is formed separate from the valve body (10, 11), a valve seat recess (in between element 10 and 11),

wherein the open side of the valve seat (21) is flush (the seat 37-39 is flush against elements 10 and 11 in figure 1), with the fluid passageway (within element 10 and 11), a raised sealing surface (40), wherein one or more protrusions (37-39) is angled away from a seat (21), wherein the valve seat (21) is hardened (the seat has some sort of hardness), a thin layer of polymeric material (40), an inner circumference surface (surface of element 21 against elements 10 and 11), an outer circumference surface (40), a continuous flow path (within elements 10 and 110, and an axis (along element 22) but lacks a metal diaphragm valve element. Wu et al. teach a valve assembly comprising a metal diaphragm member (72). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the valve assembly of Fritz et al. by changing the valve member for a metal diaphragm member as taught by Wu et al. since replacing a valve member with another valve member results in a predictable outcome.

5. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 1,947,257 (Fritz et al.) in view of U.S. Pat. No. 5,851,004 (Wu et al.) as applied to claims 1, 17, and 27 above, and further in view of U.S. Pat. No. 6,341,758 (Shih et al.). Fritz et al. modified above, discloses a valve assembly comprising a fluid passageway (within element 10), a valve body (10, 11), a valve seat (21), on or more protrusions (37-39) that penetrate the surface (in between elements 10 and 11) a portion of the valve body (10, 11), wherein the valve seat (21) is formed separate from the valve body (10, 11), a valve seat recess (in between element 10 and 11), wherein the open side of the valve seat (21) is flush (the seat 37-39 is flush against elements 10 and 11 in figure 1), with the fluid passageway (within element 10 and 11), a raised sealing surface (40), wherein one or more protrusions (37-39) is angled away from a seat (21), wherein the valve seat (21) is hardened (the seat has some sort of hardness), a thin layer of polymeric

material (40), an inner circumference surface (surface of element 21 against elements 10 and 11), an outer circumference surface (40), a continuous flow path (within elements 10 and 110, and an axis (along element 22) but lacks the valve seat is harder than the diaphragm. Shih et al. teach a diaphragm valve comprising a diaphragm (13) and a harder valve seat (211). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the diaphragm valve of Fritz et al. by making the seat harder than the diaphragm as taught by Shih et al. in order to improve sealing in the valve closed position.

Allowable Subject Matter

6. Claims 1-16, 27-34, 60-63, 74, 75, and 77 are allowed.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John K. Fristoe Jr. whose telephone number is (571) 272-4926. The examiner can normally be reached on Monday-Friday, 7: 00 a.m-4: 30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Huson can be reached on (571) 272-4887. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/John K. Fristoe Jr./
John K. Fristoe Jr.
Primary Examiner
Art Unit 3753

JKF